

# music for musicians

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### **ISSTIP JOURNAL**

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The perennial topic continues to be the musicians wellness, or to be precise, musicians occupational hazards.

Conference after conference, seminars, workshops and courses are being held in many countries, articles on the subject appear in journals, yet problems and injuries are still with us.

Why is it that so many performers and teachers treat their body and their students bodies so disrespectfully?

Surely , they all mean well, they intend to do their work in all honesty. Indeed instrumental technique has reached extraordinary high levels, almost Olympic standards. But musicians pay a heavy price, with many injuries abounding.

What then are the causes? (please note the plural. My colleagues and myself believe the main reason is lack of knowledge and understanding of the physiological factors in instrumental technique and of ergonomics the way the player relates to the instrument. This situation should be addressed with urgency by all colleges and institutions which train instrumental musicians. Moreover, teachers at all levels and performers should study them. One cannot emphasise enough the importance of giving young pupils a healthy approach from the very beginning, as we have noticed that problems creep in at these early stages and by the time students have reached the Music Colleges the damage is done.

We are publishing a **Questionnaire** on musician's health hoping that as many readers as possible will answer. Please send replies to Dr Clarey at <FDGClarey@aol.com> or if you have no email, to her home address: 33 Daysbrook Rd,London SW2 3TH

### ISSTIP COURSES AND SEMINARS

These continue at the TVU/Faculty of Arts (former LCMM).

Professor Earl Owen, Consultant of the

Institute of Performing Arts Medicine has been to the UK in September, giving lectures and workshops with musicians at Trinity College, Chetham's and Royal Northern College, and presenting a special session at the Orthopedic Clinic in Northwood, directed by Doctors Nikos and Hara Trouti, where Hara is setting up a Centre of Studies of the International Institute of Performing Arts Medicine.

A new departure is a series of workshops presented by Dr Hara Trouli in several schools in Northwood to bring more knowledge on how to use computers correctly without damaging children's bodies.

The TVU first Masters Degree in Health in Performance and Media is now in full swing with 5 ISSTIP tutors. Thus we hope the graduates will be well prepared to cope with their own problems as well as their students if they are teachers.

The first MASTERS DEGREE in MUSIC MEDICINE is being set up at Aveiro University in Portugal by Professor Nancy Lee Harper. This is a most important development in the field of Music Medicine, and Nancy hopes to involve many medical and music specialists.

**ISSTIP SLOVENIA** (Director Damjana Zupan initiated the First Seminar on Music Medicine, which will be held on 7th January in Ljubljana

### **ISSTIP Centres in Latin America**

Cuban pianist and teacher, Claudina Henandez Bean came to London in October to study with Carola Grindea for her PhD thesis on 'Tension in Performance' and she is making arrangements to set up ISSTIP CUBA.

Joy Fairclough, Kingston, Jamaica, has already established ISSTIP JAMAICA with a committee of doctors, physiotherapists, psychologists and musicians. She will soon visit London as she hopes to do an initial course to train as Music Medicine Therapists.

# THE TEN COMMANDMENTS FOR REDUCING STRESS

- 1. Thou shalt NOT be perfect, nor even try to be.
- 2. Thou shalt NOT try to be all things to all people.
- 3. Thou shalt leave things undone that ought to be done.
- 4. Thou shalt NOT spread thyself too thin.
- 5. Thou shalt learn to say "NO".
- 6. Thou shalt schedule time for thyself, and thy supportive network.
- 7. Thou shalt switch off, and do nothing regularly.
- 8. Thou shalt be boring, untidy, inelegant and unattractive at times.
- 9. Thou shalt NOT even feel guilty.
- 10. Especially, thou shalt NOT be thine own worst enemy, but be thy best friend.

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# Music within our grasp: mirror neurons in music instrumental acquisition with special emphasis on piano performance

Nancy Lee Harper, University of Aveiro, Portugal

This article connects the phenomenon of mirror neurons to the role of music instrumental acquisition, as conveyed through piano performance. It focuses on observation/execution and auditory/execution models that serve as a bridge to "doing/communication" through credible methods of "complex imitation" in goal directed actions. These include the Masterclass, audiation, visualisation, and the Suzuki method. The article also suggests areas of future study such as dystonial hand-mouth dysfunctions.

There is no doubt as to the complexity of music instrumental acquisition and especially of that of the piano with its immense harmonic and polyphonic possibilities. Following the legendary Liszt, the 20th century is replete with fascinating examples of pyrotechnical achievements. The fastest recording of the Schumann Toccata with its 6266 notes (no repeats) is that of Simon Barère at 4' 20", which computes at 24 notes/second (Wilson, 1986: 42). From a neurobiological study that used technologies to observe repetitive finger movements in pianistic trills, 98 keystrokes in the right hand were observed in the first ten seconds of the Chopin Etude, op. 10, nº 8 (Wilson in Cowell, 1992: 521). To cite other examples, it is well known that the Spanish composer, Isaac Albéniz, nearly destroyed his masterpiece, Ibéria, when it was completed in 1906, for fear that it was unplayable, but soon afterward, Blanche Selva proved him wrong. Prokofiev's newly composed 3rd Piano Concerto (completed in 1921) was also considered "unplayable", but today it is now standard fare in piano competitions for pianists even under the age of eighteen.

While seemingly "unachievable" feats become the norm rather than the exception, the question arises: "How has the level of technical pianistic proficiency advanced so quickly in the 20th century?"

One possible explanation might be offered from the discovery of "mirror neurons" and their implementation through a complex imitation system. First discovered in humans by Luciano Fadiga and his team of Italian neuroscientists in 1995 and subsequently in monkeys by Giacomo Rizzolatti et al in 1996, mirror neurons make possible many activities in humans such as showing empathy, mind-reading, language evolution, imitation learning, and others. Their absence may be observed in persons with autism. In the monkey experiment, activation of the mirror neurons took place milliseconds before the actual physical movement, such as pulling, pushing, tugging, grasping, picking up and putting a peanut in the mouth. Different neurons fired in response to different actions and occurred when observing another monkey or person making the gesture in a goal directed action. They did not fire when observing only a hand, a mouth, or an inanimate object (Ramachandran), such as a tool. This is obviously because brain motor areas regulate body parts and not tools (Sylwester, 2006) and

there was no goal directed action being displayed. The results of Fadiga and his team confirmed that "during the observation of various actions, a selective increase of motor evoked potentials occurred in the muscles that the subjects usually use for producing them." (Rizzolatti-Arbib, 1998: 190). The very fact that a brain response was activated in monkeys and in humans through observation, as well as performance of an event, is significant. "These neurons (mirror neurons) appear to represent a system that matches observed events to similar, internally generated actions....Transcranial magnetic stimulations and positron emission tomography (PET) experiments suggest that a mirror system for gesture recognition also exists in humans and includes Broca's area1." (Rizzolatti- Arbib, 1998: 188) Further evidence in humans comes from EEG brain studies in which a brain wave called MU becomes blocked and disappears when people move their hands. The same effect occurs when the person observes someone else moving his hand. It does not occur if the movement is made by an inanimate object, e. g., tool (Ramachandran). While Rhesus monkeys and apes have mirror neurons, they obviously lack the cultural sophistication of human beings (Ramachandran). We may conclude that "such an observation/execution matching system provides a necessary bridge from 'doing' to 'communicating', as the link between actor and observer becomes a link between the sender and the receiver of each message" (Rizzolatti- Arbib, 1998: 188).

Beyond verification of a visual-motor connection - "Monkey See, Monkey Do" - there is also evidence to suggest that an auditory-motor connection exists that involves mirror neurons -"Monkey Hear, Monkey Do". The "integration of motor commands with their associated perceived sounds in vocal production", studied in children's babbling (Westerman-Miranda, 2002: 367), has profound implications for music teaching and performing.2 Complex imitation, thus, is "not merely a reproduction of an external stimulus, but a re-interpretation of that stimulus based on the developed structure of the model....In the model, mirror neurons develop naturally from the correlation-based coupling of actions and their perceptual consequences: a heard sound evokes a response on the motor map, and this response is the same as that needed to produce the sound itself." (Westerman-Miranda, 2002: 372).

Therefore, complex imitation, for our purposes here, is defined as "imitation with goal directed actions" as a re-interpretation of the event that may include visual-motor and/or auditory-motor components. In music instrumental acquisition, both visual-motor and auditory-motor systems are used in complex imitation. Four specific practices will be observed: the oral tradition, of which the Master-Class plays a large role (and is both visual-motor and auditory-motor); visualization (visual-motor); audiation (auditory-motor); and the Suzuki method of instruction (visual-motor and auditory-motor).

### Oral tradition (visual-auditory-motor)

Oral transmission of knowledge has been the leading method of musical instruction for aeons. Mothers sing to their babies. Babies imitate their mothers, having heard their mothers' voices months before birth. "Learning by Doing" is a valid, empiric Modelling theory in music instruction. Both visual-motor and auditorymotor systems are the learning vehicles.

In the oral tradition, Master-apprentice situations obviously go beyond the mere primitive mimetic capacities to goal directed actions of complex imitation. Motor and perceptual representations modulate each other directly (sound activates motor commands, such as a knock on the door is heard and the gesture is perceived). A good piano teacher will know, without seeing, the physical gesture(s) involved in producing the student's piano tone. Through motor-perceptual monitoring, the astute teacher can detect anomalies of pianistic technique and thereby suggest alterations of incorrect muscular tension that impedes the flow of the music. For example, the student plays percussively. Automatically the teacher knows that the wrist is stiff and probably also the shoulders and

More than just rote teaching, elements of the oral tradition constitute a "re-interpretation" of the act heard and/or observed. The oral tradition is often the basis of how "schools" are formed, such as the German, Russian, or French school of piano playing that came from the earlier harpsichord tradition. Schools are often

associated with just one professor, such as is the case of Theodor Leschetizky (1830-1915), who claimed he had no "method". Yet, from historical recordings, not only can we hear the master play, but we can hear the similarities of pianistic tone through the characteristic sweetness and lack of percussiveness of his pupils, such as Paderewski, Friedman, Hambourg, and others. <sup>3</sup>

There is no better Modelling example in music instruction than that of the Master-class, again one that uses a visual-auditory-motor goal directed action system. In a study of three master-teachers (of piano, oboe, and viola), Robert Duke et al found nineteen characteristics in common, which could be placed into three categories: Goals and Expectations, Effecting Change, and Conveying Information (Duke, 2006: 1-13). As all the students were advanced, the teachers' primary goals were on toneproduction and musical expression for an interpretative effect. Lessons were fast-paced with negative feedback being more frequent than positive. When positive feedback was used, it came at a very strategic place in the lesson. Particularly relevant are the following:

- Teachers had a clear auditory image of the piece that guides their judgments about the music.
- The teachers demanded a consistent standard of sound quality from their students.
- Performance technique was described in terms of the effect that physical motion creates in the sound produced.
- The teachers played examples from the students' repertoire to demonstrate important points. The teachers' modeling was exquisite in every respect.

Without mirror neurons, neither the Masterclass format nor the oral tradition would have been possible. Students naturally seek out the best teachers to emulate.

### Visualisation (visual-motor)

For musicians, the practise of visualisation is of enormous benefit in fortifying their musical learning. If we recall how the mere observation of a goal directed action triggered brain activity milliseconds before the action was performed, then the importance of visualisation becomes clear. The recall of the written score in the mind's eye (without physically performing it) activates muscular memories. Visualisation can serve as a short-cut to learning. Sometimes it happens unconsciously, but usually it has to be consciously practised. For some, visualisation is coupled with *audiation* (discussed below), while for a few it is merely photographic in nature.

In other studies, low-road and high-road transfer of skills supports the mirror neuron phenomenon in both visual-motor and auditorymotor contexts. Studies of low-road or automatic (or modelled) psychomotor skills emphasise repetition. Studies of high-road or abstract skills emphasise cognitive aspects, such as meta-cognition (knowing about knowing), sight-reading, stylistic interpretation, formal analysis, etc. Mental practice (visualisation and audiation) is beneficial for high-road transfer, more for rhythm and interpretive elements rather than for note accuracy (Tunks, 1992:444). Aural models are beneficial for attaining performance accuracy of advanced students (ibid).

### Audiation (auditory-motor)

Edwin Gordon's term - the ability to comprehend a musical score without the benefit of physically hearing it - emphasises the auditory aspects of musical cognition. Audiation triggers mirror neurons and will often illicit a kinaesthetic response. Composers, as well as performers, need to develop the capacity to audiate. One study4 found that if young composers could audiate, they would spend more time on development and repetition processes (as mature composers do) than on the first stage of the evolution of ideas (Weinberger, 1998). The process of audiation, through the mirror neuron phenomenon, gives a plausible explanation to the so-called "Beethoven effect" – composing coherent, intelligible, and advanced music without the benefit of physical hearing.

Audiation is a wonderful technique, like visualisation, for reinforcing learning and memory in performance. It also accelerates learning. For some, it happens automatically, while for most musicians it must be consciously practised. The pianist Artur

Rubinstein recalled an incident in which he awoke one morning hearing a Brahms symphony. Twenty minutes later he realised that was hearing the same symphony at the place it would have been had it been performed in the physical realm. Not everyone has perfect auditory recall as did Rubinstein (he also had a photographic memory). Nevertheless, practising *audiation* can be done by all musicians is a worthwhile skill to acquire at any level.

# Suzuki or "Mother Tongue" Method (visual-auditory-motor)

So much has been written about the method of Sinichi Suzuki that it is not necessary to go into great detail about the "Mother Tongue" approach. Suzuki observed such a simple fact: Children born in Germany learn to speak German easily, while children born in Japan learn to speak Japanese easily, etc. "Why then", he asked, "couldn't young children learn to play an instrument in just this same way?" This reasoning became the basis of his method, originally for violin playing, but adapted later to almost all instruments of western classical music.

Similar to the Master-class or master-apprentice model, the Suzuki method would not be possible if mirror neurons did not exist, for the basis of the method is imitation of sound, of technique, of attitude, of musicality, and other factors. It is the classic "complex imitation method". For instrumentalists, technique and tone are imitated and reinterpreted, while for singers, the oro-facial gestures and sounds are targeted.

### Conclusion

Talent hits the target that others cannot hit; Genius hits the target that others cannot see.

Arthur Schopenhauer, 1788-1860)

Returning to our original question "How has the level of technical pianistic proficiency advanced so quickly in the 20th century?" it is clear that

through the mirror neuron phenomenolearning is transmitted. Coupled with of critical mass – the so-called "hundre monkey" theory's - the phenomenon of neurons may be responsible for most be learning. In the case of piano technique that one person performed the "unperfethen someone repeated it through confimitation, then another, and yet anothe better, led to the development of technical to the development of technical to include the Prokofiev 3rd piano conformal high school competitions.

What will the future bring? Gifted chi our expectations and pave the way to The twenty-first century brings infinit possibilities for research. From curren knowledge of brain functioning, the c that hand and arm movement function located in the same part of Broca's are originally thought to be only for spee activities, is significant for musicians pianists in particular. One of the most pianistic problems is that of excessive movements of the mouth while playing problem of "motor mouth" movement as a kind of dystonia by Carola Grind (Harper, 2004), afflicts many pianists, such famous ones as Glenn Gould, Re Serkin, and others. While good teache encourage their pupils to open their i slightly while playing, not only to rel avoid this unsightly habit, there is a r future brain studies in this area of "ir coordination" of hand-mouth moven Further studies, by both neuroscientis astute piano professors, should be me order to find a solution to this distrac detrimental problem.

### Refences

1-Normally associated with brain area in b speech, Broca's area was recently found to hand or arm movements (area 44) or hand notations (areas 44 and 45).

2–Some theorists propose that language in derived from musical sounds and gesture music is born from language (see Turner,

3–For an interesting study on "Mastery th Imitation" of violinists, see Lisboa, William

4-J. Kratus, Journal of Research in Music Edit 1989, p. 5-20. 5 The "Hundredth Monkey" Theory, or theory of "critical mass", resulted from an experiment by scientists in the 1950's who threw sweet potatoes to monkeys on Japanese islands in order to observe their habits. All but one monkey ate them as they were, covered in sand. The one young monkey who did not like the taste of the sand began to wash the sweet potatoes before eating them. Then she taught her mother to do the same and then her playmates, until all monkeys on the same island were imitating this

procedure. Soon, the practice was found to be implemented on other islands. Thus, in the "Hundredth Monkey" Theory, when a certain critical number achieves a new awareness, this new knowledge then becomes universal. While the exact number needed to attain to universal knowledge is not known - it could be the "hundredth" monkey - the theory seems to be substantiated.

### **INGER DAWSON**

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# Simple Anatomy of the Neck

Dr. Hara Trouli

It is amazing and at the same time frightening to realize the comple. of the body structures that we take for granted in our everyday life. Let alone when these structures are involved for some of us in precie paramount activities such as sport, dance and music making.

The performers who rely on the fitness of their body very often assume that these structures are by default in good condition and therefore little attention is given to them. Often, however, they are proven wrong and without realizing they develop problems and handicaps that sometimes they are difficult to treat without interrupting the particular activities.

It is not the purpose of this article to engage into details about the possible pathological conditions that may arise. It is at this stage my intention to remind to some and to bring to the attention of others the delicate anatomical correlations of our bodies in order to perhaps at a later stage be able to understand better the potential misuse and consequent symptoms if they ever develop.

The Neck, or in anatomical language, the Cervical Spine, will be the topic of this issue. It refers to the part of the spinal column that descends just below the skull and reaches above our shoulder blades at the back. This is the part that so often gets 'stiff' and 'knotty' and sometimes makes 'cracking' noises when we move our head sideways or up and down.

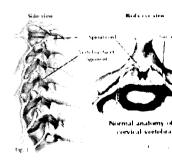
The Cervical Spine is made up of seven vertebrae stacked on each other more or less like the rest of the spine. The vertebrae are bony structures with a peculiar shape that sit on top of each other with a cushion in between their front solid bodies. We call this cushion the intervertebral disc and its position and integrity is vital for the smooth function of our neck.

The rest of the vertebra forms a hole with bony spikes towards the back and the sides. The holes on top of each other make up a long bony tube that contains our spinal cord, a structure so

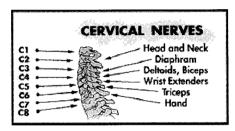




important and delicate particularly at level of the spine. The spinal cord witl nerves at this level is responsible not of the movements and sensations from or and trunk but also it controls vital funsuch as our breathing and our heart be parts of the vertebrae that extend to the also connect to each other by small join allow the neck movements. These are facet joints and it is between them three small canals that the cervical nerves co the spine and start their journey to the jobs in the upper part of our bodies.



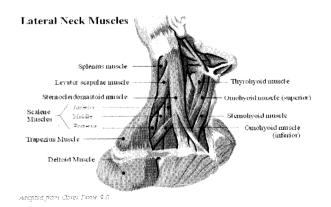
The nervous system is a very complex anatomical configuration with extraordinary correlations with all the other systems of our body. It controls with its nerves movements, voluntary and involuntary and sensations of hot, cold, pain, touch and position [proprioception]. Its good and unobstructed condition all the way through is extremely important. For the sake of simplicity the diagram below shows us the basic parts of the body affected by the cervical nerves:



To support the spine in the upright position we have the spinal ligaments and further out the neck muscles again with an amazing anatomical correlation. The muscles that we can commonly feel with our hands are the big outer muscles called the trapezius muscle at the back of our neck [common massage spot] and the sternocleidomastoid muscle that forms quite a distinctive structure at the side of our neck when we turn our head to the side.

It is important to understand that the neck is a junction between our head and our upper and lower body. The neck supports our head, both skull and brain, and carries all the nerves down to our arms and legs as well as our chest and vital organs. Particularly the nerves that reach out to the arms all the way to our fingertips form a very significant plexus[ brachial plexus] that starts from the sides of our cervical spine and narrows down to enter our arms. These nerves feed all the tendons and muscles of our arms and hands and bring back to our brain the sensations that are created out there in the periphery.

Every movement and position of our fingers, wrists, elbows and shoulders is magically processed in our brain and within milliseconds our voluntary nervous system orders and achieves the desired result when we play our music. Good anatomical posture of our neck in the standing, sitting and lying down positions is of utmost significance to avoid unwelcome symptoms and to achieve the best results with our performance.



# MUSICIANS INJURIES Teachers and Performers Treat Your Body Respectfully

Carola Grindea Director ISSTIP International Institute of Performing Arts Medicine

Why are the physical problems of musicians still so prevalent, despite all the research done in University Faculties of both Medicine and Music as well as all the work done in specialist clinics dedicated to the health of the performing artist? We are inundated with conferences and seminars, workshops, books and papers on the subject and yet, such probles are on the increase. Why should this be?

Why are so many performers and teachers treating their body disrespectfully? It is high time that this attitude should change. How can this be done? Easy to say but not easily done.

Many of my colleagues and myself believe that there must be a failure in the early teaching of instruments and it is at this stage that the misuse and abuse of body and muscles starts. It is at this stage that teachers should have a sound knowledge of what is correct physiologically and what movements should be introduced to develop a healthy instrumental technique.

I do not wish to belittle the great work which so many teachers are constantly doing throughout the musical world, this is not my aim. What is greatly needed on the part of these teachers is to study the physiological principles of instrumental techniques, to know which movements are correct and which are not, and, especially, how to teach young pupils how to relax their muscles and joints and how to maintain this state when playing, when inter-relating with the instrument. The responsibility lies with the Music Colleges and Institutions which train such instrumental teachers. The Physiology of

Instrumental Techniques and Ergonomics should be on the curriculum of all music students, whether they specialize in performance or education. Actually, the majority of performers do some teaching as well, as not many can make a living only from concerts.

### POSTURE AND ALIGNMENT

All disciplines - Eastern or Western-demand a straight, elongated spine. I would like to add that a correct posture should have also an alignment of spine with the shoulder girdle forming a perfectly horizontal line, thus the body should have the shape of the cross. Most cases of tendonitis or other dysfunctions are due to mis-alignment.

Recent cases of bass guitarists who go through the ordeal of fore arm operations (trapped ulnar nerve) to relieve the constant pain, when the cause is mainly a distortion of the body with the spine twisted from the pelvis towards the left, to hold the instrument. Ms C, a very committed professional violinist has been on sick leave for several months while having Alexander Technique, physiotherapy and acupuncture sessions as well as retraining with a violin teacher specialising in injuries. She came to ISSTIP and she realized that the cause was simply a distorted spine from the pelvis upward. She turned her torso to the left also bringing her left shoulder forward to support the violin while her feet and legs were facing a different direction. As soon as she could hold the violin in a correct stance, all pains vanished. These are only a few of the hundreds and hundreds of such cases. (Fig 1 and Fig 2)



Fig 1 Distorted back

Fig 2 Perfect alignment



Fig 3 Distorted body

Fig 4 Correct hold of instrument

When an instrumentalist comes to the clinic, I ask him/her' to MIME the hold of the instrument' while facing the mirror. I call this 'the moment of truth'. Invariably, the body adopts a distorted stance as it has done for many years. From then on the work of re-training - is easy.

For a good posture it is not enough to stand up or sit with a straight spine, It is very important to FEEL that there is no TENSION in any of the joints or muscles and that the whole body feels free and relaxed.

# ERGONOMICALLY CORRECT MOVEMENTS

The science of ERGONOMICS teaches how the Instrumentalist interacts with his/her instrument and, as I mentioned above, all instrumental teachers and instrumentalists should study it.

Unless there is an ergonomically correct interaction between the body of the player and the instrument, physical problems will always occur.

It is known now that the slightest distortion of a joint or muscle will cause a chain reaction throughout the whole body.

### HOLD OF THE INSTRUMENT

Other problems occur when holding the instrument incorrectly.

The first principle is: Adapt the instrument to the body , not distort the body to fit the instrument.

By now, the musician should have a perfectly aligned and balanced posture, and all he has to do is to incorporate the movements needed to play but make sure that these are well coordinated and free of any tension in any joints or muscles.

To reach a state of balance of the body is very easy, but to maintain this while playing virtuoso passages, demands constant awareness on the part of the player. Only when the movements and all other aspects of the instrumental technique become part of the automatic pilot will the process of reeducation of the motor sensory system be completed.

### WARM UP AND WARM DOWN BEFORE AND AFTER PRACTICE OR PERFORMANCE

Medical specialists, physiotherapists and all sport medicine therapists advocate warm up exercises before any activity and warm down at the end (Fig 3)

I recommend a few minutes of specially devised

exercises to benefit musicians and other performers (Healthy Piano Technique by Carola Grindea, Boosey & Hawkes 1) to be practiced together with a Mental exercise, Grindea Technique (Healthy Piano Technique 2) which takes only one or two minutes to bring the whole body in a perfect state of balance. The player is now ready to start practicing and will be ready to perform on the stage.

Remember: Do not start without warm up and warm down ( See Prof Earl Owen " Warm up and Warm Down Exercises" www.naxos records)

# SPECIFIC INSTRUMENTAL PROBLEMS

Violinists and violists

- Many raise the left shoulder and /or bring it forward to support the instrument. This distortion hinders the free forearm rotation thus the 3rd and 4th fingers cannot reach the G string easily, not to mention the acute pain.
- In many cases players hold the instrument with stiff joint and muscles
- The thumb is not relaxed when playing, thus both hands are not free to move.

  Cellists and guitarists twist their body to the left or to the right, to adapt to the instrument, thus their pelvis and spine are not aligned.

  Many collists hold the how tightly with a
- Many cellists hold the bow tightly, with a stiff thumb.

Learn to hold the bow very lightly, finding the point of balance when holding it between the thumb and 1st finger, moving it by rotating the wrist in both directions until the bow is balanced, then it feels weightless.

Left hand and arm hold the cello with tension in the (often distorted) shoulder, elbow and wrist; the thumb is not relaxed and fingers cannot move freely along the finger board. These are some of the most common disorders I meet.

### Guitarists present similar symptoms

-Wind and Brass players develop tendinitis when holding the instrument with any tension in their joints and muscles or distort their body, especially flautists and bassoonists. They also develop embouchure disorders which sometimes are difficult to cure (focal dystonia) Pianists and other keyboard players should learn to sit slightly bent over the keyboard, not

rigidly erect, It is highly recommended to use some blocks placed under the back legs of the stool, (Comberti Blocks)

I hope that by studying how to achieve a healthy approach to instrumental playing, many of the occupational ailments will be prevented in future.

# WHAT TO DO AT THE MOMENT OF PERFORMANCE?

The best advice is to prepare your body and mind for that crucial moment. Do the Grindea Technique to bring total stillness in the body and mind and you are ready to cope with everything, nerves, physiological reaction to anxiety. You have the confidence that you are well prepared, you have done your work so you can trust your mind and body that they will serve you.

Enjoy your performance! Music should be enjoyed.

# 1) Physical Exercises to Warm Up and Down:

- a) Raise both shoulders as high as possible, pull them gently towards the back then FLOP them, relaxed. Repeat 3 times.
- b) Swing the whole arms first forward and STRETCH then upward wih arms STRETCHED in one line from the tip of the fingers to the heels. The more you stretch the healthier it is for the whole body.

  Make sure the alignment is correct. (Fig 3)

  Now send your arms horizontally, (body has

Now send your arms horizontally, (body has the shape of the cross ) STRETCHING them, push hard 3 times, then let arms FLOP, relaxed.

# 2) Grindea Technique which corrects any imbalance in the body.

There are 3 stages:

a) Stand very still, with feet apart, concentrate on the spine and order it to lengthen, to move upwards.

You will experience the strange sensation of the head being gently lifted and placed towards the back, on the last vertebrae.

- b) Exhale very slowly, whispering Ha-a-a-a-a-a, sending the breath into your body, affecting the diaphragm and relaxing it.
- c) concentrate attention on knees and ankles,

imagining them very flexible, soft like foam. At this stage, the body should feel very light as if floating It is now in a perfect state of balance.

This mental exercise takes only one or two minutes and it should be practised as often as possible, before starting to play and during the practice or performance, whenever you have a pause.

Exhalations are most beneficial, they calm the physiological reactions to anxiety.



Fig 5



Fig 6

# Developing your potential through breathing exercises

Damjana Zupan

Life is offering us various choices and our common choice is that we are musicians – pianists and piano pedagogues. Yet, we are all very different and as our profession has wide possibilities, we can therefore choose from many different paths.

It may be either character, destiny, social environment, fear or courage ... there is a variety of causes which can determine our choices and, as a consequence, our life and career. Good choices can bring happiness but sometimes, our choices can also undermine us. It is therefore important that besides having an aspiration we also need to be well prepared to follow the chosen path. Knowledge and experience (not to mention the important role of finances!) are not necessarily sufficient – in order to fulfill the challenges of our choices, we must also be physically and mentally fit.

In addition to the specific demands of our career, with its stressful life such as hours of sitting and practising - in many cases using the wrong technique, performing under pressure (stage fright), busy schedule with lots of traveling, etc., there are challenges which can diminish the efficiency of our good choices. Too many tasks and worries as well as wrong usage of our body affect our ability to handle all the challenges at once. As a consequence, negative tensions start to take over the control of our mind and body. In addition, they begin to create blockages in our brain, which threaten our physical as well as mental health. It is therefore important to recognize all, negative as well as positive tensions which determine how we function. They are a result of various patterns behavioural, mental, physical and physiological - which are stored in our unconscious mind. For example, we do not need to consciously to think how to breathe, walk, speak or act when in danger, and it is important to identify the existing patterns, to learn new ones and choose those that help us be more efficient when

facing difficult situations. The efficiency of these patterns should constantly be examined.

Recognizing patterns of our functioning as well as using right choices effectively is the most important element in order to stay physically and mentally fit. The process of learning and recognising these patterns represents the basis of my seminars which I organise in Slovenia to a variety of different participants – from nonmusicians to musicians, from little children to retired people. I work with music teachers which I find most interesting, whether they are young and not very experienced or have made a name in profession with their students winning national and international competitions. My work with these teachers is based on the knowledge which I have gained through research on stage fright as well as other causes of physical and mental instability and through learning about Alexander Technique, Feldenkrais and Grindea Technique. At the same time, my approach for these seminars also stems from my own experiences as a teacher and performer - in recent years mostly as a piano teacher and an accompanist at the Secondary Music School in Ljubljana.

At seminars, participants mostly expect me to make them relaxed as well as giving them an instant recipe to become more confident and overcome stage fright. Although, one could say that the answer lies in the Grindea Technique, the problem is that without daily or at least regular practice, the problems may reoccur quickly. Unfortunately, many give up the effort of regular exercises – still hoping to find yet

another, even easier and effortless way which would help them, not realising that nothing can happen without moving a finger. Fortunately, there are many of those who persisted and who have proved the positive effects of practising Grindea Technique.

The most important moment of the seminars is the when musicians admit openly that they have some problems themselves. Due to the fear of loosing recognition or even job, these symptoms are usually not discussed, especially not among fellow musicians.

It is of great importance that a musician consciously recognizes that stage fright and / or pain when playing an instrument are very common and that they affect quite a large number of people. However, it is even more important to admit the problem to oneself and try not to fight against it, sometimes with a disastrous result of giving up performing. It is essential that one becomes more focused on the present moment and problem, rather than on the ultimate goal. Future success depends on our ability to be more flexible and capable to take the best of this very present. This can be done by developing an awareness of the physical and physiological state of our body, as well as of the mental and emotional processes, of which there are some that can cause mental disorders or physical illnesses but there are also others that can help us achieve the highest results and give us great satisfaction.

I recommend several mental and physical exercises .

The results of such an exercise are various and they range from 3 to 25 cycles in a minute. According to scientific research, an average person at rest usually completes between 12 – 18 cycles in a minute. However, especially those who practice breathing regularly or do any other body awareness techniques can bring this number to seven or even less. A rhythmic, regular breathing pattern with deep awareness can calm our body and mind, reduce stress symptoms, and it can enrich the quality of our emotions and the overall quality of our life. Alas, breathing disorders are very common among performers. The slightest anxiety in the mind, - for instance before a difficult passage, - brings rigidity in the body, the player stops breathing an only pm; at the end of that passage, he sighs with relief. Keyboard players, unlike singers, wind and brass players do not study breathing patterns, yet this needs to be studied and practised regularly.

Learning how to breathe properly can have beneficial influence on our life. Once we learn to sense and feel our breathing pattern it is important to experiment with a variety of patterns learning about the physiology of our own breathing, and being able to choose the ones which suits us best. It is important to emphasize that breathing is an unconscious process and if we do breathing exercises consciously, this may interfere with the natural biological processes and we may feel uncomfortable. However, it is important to recognize and adopt and apply those patterns which have proved rewarding.

### **EXERCISE 1:**

Recognizing breathing pattern

I would ask you to focus on the present moment. Remain as you are, do not move, close your eyes and just focus on your breathing. Sit very still and just concentrate on your breathing for a minute or two. Be aware if you can feel which part(s) of your body are affected by the motion. Observe your breathing pattern.

Now watch how many cycles of breaths you do in one minute.

### **EXERCISE 2:**

In the next experiment we will continue to learn more about our own breathing pattern. We will attempt to find out whether the existing or other patterns are better for us.Sit down, comfortably, with your feet placed on the floor and your arms resting your lap. Close your eyes, sit very still and focus on the way you are breathing.

Be aware of the air and its warmth coming in and out of your body.

Be aware whether you breathe either through your nostrils or through your mouth.

Focus your awareness on your chest and its movements while you breathe in and out.

Focus your awareness on the position of your stomach while you breathe.

Focus your awareness on the position of your shoulders, arms and hands while your breathe. How do they relate to the rest of your body as you breathe in and out?

Be aware of your back ... your sitting bones ... your legs and your feet while you breathe.

Now feel whether your back expands when you breathe. Focus on your upper back first and then to the lower back.

Experience the movements of both your chest and your stomach while you breathe.

Sense how your sitting bones relate to the surface on which you sit.

### **EXERCISE 3**

Now, as you breathe in, imagine how you bring the air to the top of your head and then exhale by imagining how you send it down your back, through to the bottom of your pelvis.

Sense the rest of your body as you do this breathing pattern.

Expand your breath now even further: as you inhale deeply, then exhale through your mouth or imagining the air coming from the bottom of your pelvis through to the front of your upper body.

Sense this new breathing pattern and how the rest of your body feels. See how it feels if you inhale through the top of your head down to the bottom of the pelvis and exhale by imagining how you send the air right down to your feet.

Now expand again the cycle of your breathing. Inhale by bringing the air through the top of your head and bringing it down your back to your feet and exhale through your nose or mouth by bringing the air from your feet up the front part of your body.

Sense how your entire body is involved in your breathing.

As you have tried various patterns of breathing you may have experienced that some patterns suited you better than the others. Choose the ones that you feel are the most comfortable for you at this moment. Experiment with the pattern of breathing that you feel best.

Now measure how many cycles of breaths do you take in one minute and see if there are any differences.

Very often the second measuring of breath cycles is quite different to the first, even 8 to 10 less cycles of breath!

If we decide that the new pattern is more suitable for us then we can either practice it regularly or choose it as the new way of breathing. This requires patient practice many times before our body and the brain apply it unconsciously, as part of the 'automatic pilot".

Even then, especially in stressful situations, it may happen that one switches back to the

previous pattern. However, conscious control can soon replace the less efficient one with the more efficient breathing cycle.

In conclusion, I would like to add that when performing, trust your body and mind, breathe with the musical phrase", allowing the music and your feelings to flow on your breath through you into the audience and further on. Thus through new breathing patterns, new choices are given which help to develop our potential and ultimately, our career.



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# Prevention of Occupational Injuries in Young Pianists

Marina Petrov Stoykovich

Every time when a young child walks in for the first piano lesson, many of us piano teachers perhaps wonder if this child will become a musician or if they will give up learning altogether. Whatever the outcome, even if piano playing is going to be just a hobby, I am sure that we all wish them a very good start.

### What is considered to be a good start?

At the very least, a good start means that the teacher should have a healthy approach to learning to introduce a technique that encourages a relaxed style of practising, thus protect the pupil from occupational injuries. If pupils love music and their piano, they should be helped to play without any physical pain or discomfort as well as any psychological problems. This is a great responsibility for the teacher. However, I believe that we as teachers are obliged to give them a good foundation in piano playing. Only through our dedication and persistence can a young pianist develop good piano technique, the key to ensuring our students learn to perform any technical tasks effortlessly, and then they will enjoy their piano playing with confidence.

# How can a teacher provide the best start for young piano players?

Essentially, teachers themselves need to be aware and have a better understanding of a child's body and muscles and how they function. Also, to have an understanding of the child's mind and of the psychology of a young pupil. A good teacher should treat each pupil as an individual, each one needing a different approach. It is of great importance to teach them gradually about themselves, their bodies, how they function while playing, about their own abilities and restrictions from the very start. As early as from the first lesson we should pay attention to three main aspects such as posture

the position of hands and arms, and the release of tension in young students which usually occurs when they experience the unknown (touching the keys for the first time as well as having an individual lesson).

### The posture

The posture is extremely important and the teacher should take care that the chid sits correctly at every lesson and remind him to do so when at home. Children need to learn the following to a level that becomes part of the 'automatic pilot'.

- *Spine* should be straight without much effort and without tension in the shoulders, not in any other joints like elbows and wrists so they can use their arms freely. This is helped if one sits on the edge of the stool facing the keyboard.
- *Neck* should be straight and in line with the spine, without moving forward.
- Feet for the body to have a proper balance it is also necessary to position their feet on the ground. If the child can reach the floor with its feet, I recommend the feet should be placed next to the pedals. In this position they should have no tension between the legs that will affect the whole posture. If properly seated at the piano the beginner is going to be ready for using both pedals in future without any problems or discomfort.
- Seat Height furthermore, the position of their feet would be necessary for the spine and its muscles not to be overloaded with extra work or strain. If the youngster cannot reach the

floor with their feet, the best solution would be to get an appropriate foot stool underneath their feet. We should also remember that piano stools are made for the grown ups and therefore, it is better to have an adjustable stool if possible; children need to sit higher than adults as it is easier for them to position their hands and arms above the piano and learn to use the weight of the arm when playing.

### Position of hands and arms

The following five main causes of tension should be avoided:

- Wrong position of hands on the keys
- Unbalanced or stiff wrist, elbow and tension in shoulders
- Over -training or over-use of fingers
- Over-stretching of hands
- Absence of using the weight of the arm while playing.

If those are not met, the occupational injury in young pianists will occur at an early stage if they practise for a long time without a rest.

Let's examine more closely the main causes of tension:

### Over-training and over-stretching

As we start to teach them to play scales and arpeggios faster, we often ask them to lift their fingers so that they can move freely and play more evenly in time. However, many children can take our words and demonstrations too literally - they over do it by lifting fingers too high, which could cause injury later on. The over-use of fingers may cause inflamation of the ligaments of the hand, fore-arm or can affect the wrist as well. In order to prevent such problems we should teach them that the finger movements should be more active without raising them too high, then dropping them on to the keys. The child needs to think that *fingers* should "walk", not "march" on the keys.

Over-training is quite common in talented and ambitious beginners, and/or with determined parents. We also find this problem in some specific musical institutions for gifted children where there is very high expectation of ones achievements in their early musical career.

Whatever the case, we should take into consideration the physique of each young pupil. The child with a tiny build is much more prone to injuries then the one with larger hands and stronger bone structure. It is also important to choose the pieces carefully for students with smaller or less flexible hands. While young, muscles are still developing and their hands are not strong enough to play too many octaves and chords. Furthermore, students should not be encouraged to practise for long periods. Over practising and over-stretching often leads to more serious physical problems.

20 minute rule! In my experience, I found the best way to avoid over-working is to teach them from the start to have sense of achievement after short period of time. If they concentrate and look for solutions to the problems related to various piano techniques, the pupils should hear better results even after twenty minutes of practice. It is of importance for the pupil to understand that if one does not hear an improvement in playing after a while, it is useless to continue to practise in the same manner. Unfortunately, students can wrongly assume that lack of immediate progress equates to lack of ability and talent. In most of these cases, this is not true and we as teachers should encourage them to use their "mind over matter" and focus better on the issues that solve the problems in their playing.

### Wrist stiffness and the role of the thumb

As mentioned previously, a correct posture and hand position are vital for reaching their highest potential. All great pedagogues recommend a position of the hand over the keyboard with a perfect alignment of the knuckles, the forearm and the elbow while the arms are in the state of balance. It is crucial that fingers are curved , with relaxed finger-joints, and the keys to touch by the pads under the nails Only then, fingers will be able to be active and move fast enough to reach virtuosity.

The *thumb* is of great importance it needs to be positioned diagonally towards the keys, touching the key at the base of the nail. There has to be enough space under the hand so one can move the thumb from the thumb muscle without moving the wrist, although the wrist

should be flexible at all times. However, if thumbs are stiff or positioned flat on the keys, a player may often develop pain in the hand, wrist or forearm, if practising for longer hours. It is also difficult to play more evenly and legato when wrist is stiff and "wooden" where fingers lose their activeness, precision and strength due to joint cramp.

These consequential problems finally affect the stiffness of elbows that can cause damage such as ligaments' inflammation known as tennis clbow. So, it is a chain reaction - the wrong position of the thumb can affect the whole arm - the wrist, forearm, and elbow Furthermore this can cause in extreme cases irreversible nerve and muscle damage.

### Tension in shoulders

Tension in the shoulder is a very common occurrence in young as well as more experienced piano students and there are several reasons for this. The best advice we can give a student from the start is to learn to relax the shoulders which must be in correct position.

When practising for many years with tension in shoulders, the students can develop pain in the shoulders, neck, and the back. The nerve and muscle inflammation of tissues is a result of sitting with a wrong posture, such as raising one or both shoulders. Very often, this can create a lot of tension mainly in the elbows. From my own experience, I found that if a young player sits properly at the piano, it becomes difficult to raise the shoulders inappropriately and therefore, the right posture sitting at the edge of the piano stool is absolutely essential. It is also important to teach them about the role of the shoulder in piano playing as well as involvement of their whole arm. In order to play on the right or left side of the keyboard freely, they need to move their upper arms from the shoulders. Even with a loose elbow, flexible wrist and good hand position, they often fail to use their upper arms to reach and play the opposite sides of the piano. When some students try to reach the further ends of the piano with both hands playing in the same direction without using the upper arm, they often move from the centre seating position and raise their shoulders. When a student wants to move from one end of the

keyboard to the other, he/she should not raise their shoulders or move their bodies, but use their upper arms instead. By doing this, a young player becomes more aware of the importance of using their whole arm, its purpose, and the role of the shoulders while playing.

### The weight of the arm – the final frontier

The final stage of our teaching good basics in piano technique is to teach them how to use the weight of the arm while playing. Only with correct posture, hand position, good finger action, use and awareness of the whole arm young pianist uses the weight of the arm naturally. From that point they will build their muscles and develop a healthy piano technique free of injury.

The teachers work is far from over as they will have to further guide their students towards a higher level of playing. Pianists need to learn how to use the level of weight on each key depending on the music they play: to play slow melody lines one uses more weight of the arm flowing into the fingers; if playing fast passages to use minimum of arm weight not to overload the arms when playing too heavily. The role of the wrist is also of a great importance in using the weight of the arm – it is like a bridge between the whole arm and hand. At all times, whether they play loud chords with more weight or melodic lines or scales passages needing velocity with less weight, the wrist should be always relaxed and balanced.

### Release of mental tension

Psychological, mental or emotional tensions are other factors for stiff and raised shoulders in pianists off all ages. Trough my long teaching practise I came to a conclusion that most talented young students are more vulnerable and emotionally tense then others. They are prone to raise their shoulders more frequent, stiffen their elbows, make unnecessary movement with their hands (swinging with elbows, raising and lowering wrist while holding the same key, pushing the keys with their fingers, etc). This may happen especially when they get involved in pieces of music which they like most, perhaps because they perceive music with more involvement, temperament and feelings while playing. The

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teacher should observe constantly the pupil's movements although it is advisable to raise and discuss these issues during the lesson. We need to help them to be aware of their own body and muscles and concentrate on other matters such as the technical aspects, and above all to think about the musical content, the phrasing and he sound they produce.

The other main causes could be of psychological nature and of mental tension. The fear of playing an instrument is common in beginners as they are often very unsure about themselves: how to touch the keys to produce nice sounds, how to move the fingers , and the worry of making mistakes.

Very often pupils stiffen their whole body before even playing just one note.

The teacher's role is to help the student to sit comfortably and learn to relax the whole body, by using some relaxation and breathing techniques.

### Conclusion

After many years of enjoyable teaching and invaluable study in this field I came to important conclusions. A teacher can give students the best start by promoting physical, aural and mental awareness, as well as a healthy approach to piano playing and musicianship.

This greatly reduces risk of occupational injuries in pianists. However, providing the best start and continued guidance and support can be a complex task. It needs the teacher's complete dedication, patience and attention.

rinally, the students' involvement is essential - they need to learn to focus better when practising by themselves and above all, they need to realise that piano playing should bring them pleasure, not stress and that their body works naturally together with the piano. Pianists should enjoy themselves while playing, find it mentally stimulating and physically comforting and a rewarding experience.

### Reference

Neuhaus, Heinrich. (1917). *The Art of Piano Playing*. (Translated by K.A. Leibovitch, first published in GB in 1973 by Berry and Jenkins, the last edition is by Khan & Averill, 2002.)

Long, Marguerite. (1957). *Le Piano* (Salabert Editions – 2002).

Dr.Pronkova, E., Melnikova.T., Prof. Minsker, G. (1998). Prevention and Rehabilitation of Occupational Injuries in Musician, ISSTIP Journal, No 9, 11-12.

Grindea, C. (2001). *Healthy Piano Technique*, (edition by Boosey & Hawkes)

Grindea, C. (2002). The role of the thumb in pianist suffering from Focal Dystonia, ISSTIP Journal, Issue No 74, 22-24.

Grindea, C. (2004). LIST THE INNOVATOR: His Legacy to 21st Century Pianism, EPTA Piano. Journal, No 11, 17-19.

### **ISSTIP MEMBERSHIP**

Thanks to the many activities more members join ISSTIP but this is not enough, we need more people to work with us,to help spread the knowledge acquired for the good of our professions. Only in this way may we hope to reach a PREVENTION of the many occupational hazards affecting thousands and thousands of performers, teachers, students and young pupils.

### Help us to Help Others

# Musicians' Habits and How Music can shape our lives

Cat Jary
Cellist and Alexander Technique Teacher,
Director of The Alexander Music School

'You are not here to learn to do exercises or to get anything right. You are here to learn to meet a habitual reaction to a stimulus and learn to deal with it' F M Alexander

For a musician, music is an enormous stimulus. In our efforts to get the music right we frequently send ourselves wrong. Many musicians, when things start to go wrong, ask why has it happened to them? There is no single answer, but generally a combination of factors, including driving mental messages such as the desire to get it right, the fear of getting it wrong, over-emphasis of certain aspects of playing and blocked or unresolved emotional pathways. These days, most musicians have heard about or tried Alexander Technique Jessons. Once people

tried Alexander Technique lessons. Once people realise they are talking to an Alexander teacher, reactions can vary widely and trigger some very strange behaviour. Some people suddenly revert to a rather peculiar and unnatural pose, sitting up as stiff as a board and looking decidedly odd and uncomfortable. Some people have fond memories of drifting off whilst lying on the table, whilst others grimace at the recollection of moving in and out of a chair 'properly'.

Occasionally a musician's eyes will light up as they explain that it was the most fascinating and challenging thing they ever embarked on, and it has been invaluable in not only helping them to keep playing, but to find the tools to bring to many other areas of life.

Musicians' habits are both universal and unique, each with their own special blend of idiosyncrasies. Alexander teaching is similar to being a detective looking for clues, often well buried and hidden, that give an indication of deep-rooted habitual responses to the events of life, such as mannerisms or a sharp intake of breath before speaking (as one trombonist admitted "F\*\*\*! I've just realised I've lived my entire life staccato, no wonder there's no flow.)

# Alexander Technique and psycho-physical unity

F M Alexander, in his teaching and books, always emphasised the fact that we are psychophysical beings, and that the mind and body cannot be separated. As soon as we start to think psycho-physically this changes the emphasis of the work, that the body cannot be treated as an awkward added extra, but as an integrated part of an overall whole, involving a person's thoughts and emotional reactions. Habits of tension, which maybe a musician previously considered as purely physical, suddenly reveal that habits of thought and deep-rooted anxieties are playing a huge role in the overall programming of a person. For instance, tension experienced by a string player in the arm may well be triggered by a nagging worry about poor intonation or tone control, masking a deeper fear about not being good enough. The musician ends up trying to execute a list of jobs at the instrument, to overcome the fear of failure, all of which are distracting and just serve to create a barrier between the musician and their music. Whereas the physical tension is noticed as unhelpful and a hindrance, often the strong driving mental effort goes unnoticed and unchallenged, as the player assumes that this is necessary in order to produce the desired result. For many musicians, it is the habits of thought, determining what they think they need to do in order to produce the note, which can be more challenging to work with.

One habit of thought Alexander identified is what he called *end-gaining*. We become so interested in the end result, just wanting the

outcome, that we ignore the steps along the way that guarantee that we will end up doing what we want. End-gaining is a psycho-physical habit, driven by the thinking, ie the end result, and with certain visual symptoms that reflect the amount of effort and strain involved. Frequently playing the instrument intensifies the amount of end-gaining, making the habit more visible, and ultimately more painful. For instance, if a person arches their back, holds their breath, holds their chest tightly and puts themselves under a degree of clenching in order to get in and out of a chair, it is almost certain that this is the manner in which they will play their instrument. The greater the pressure, the harder we try to attain the desired outcome, and the more pronounced the habit. If the endgaining tendencies can be spotted and challenged in other walks of life, such as driving, physical activity, relationships, musicians can start to work to reduce it with the instrument too, where, having been practised for years, it is frequently stronger.

F M Alexander wrote a fascinating chapter in his book 'Constructive Conscious Control of the Individual' about how our fear of getting it wrong, starts to dictate the patterns we develop to overcome these anxieties. These habitual reactions start when we are young, almost undetectable, but if reinforced on a daily basis, strengthen and grow, like stalactites, until later in life they quite literally shape our character, body and the course of life, until we end up stuck in our ways.

Our habits are deeply ingrained, created, cultivated, nurtured and protected by us, and sometimes those around us. Even though we may not like certain patterns, discomforts and modes of behaviour, it can be more appealing to continue with these than to try a different approach. We know how they work, and where they will lead. Many people start Alexander lessons warily, fed up of the stage life has reached but scared to change what they know and what the lessons may reveal about ourselves. However, Alexander work is incremental, and the pupil dictates the pace at which they are prepared to ditch habits, open up and become free of tensions and old ways.

### Psycho-physical Habits

In Alexander, a lot of the vocabulary can be taken on a purely physical level, but if the

following words are considered psychophysically, it can start to give an inkling into all sorts of areas that Alexander work can apply to. BALANCED, COLLAPSED, TWISTED, STRANGE ANGLE, FLOW, UP, DOWN, STOP/START, TENSE, HABIT, PATTERN, STEADY, ATTRACTIVE, SCREWED UP, TIGHT. Whilst these are all words we use in daily language in a variety of contexts, frequently we consider those around us in these terms, both physically and characteristically, but remain blissfully unaware of how they relate to us. Alexander work enables us to recognise our traits, and to become more aware of our own tendencies. Equally, frequently we seem to come up against the same story time and time again. Alexander can show us the role we are playing in contributing to certain patterns of behaviour, whether we tend to react against or go along with situations. Often we are powerless to change the situation, but we can change how we play our part.

The following characteristics can match certain patterns of behaviour, and again we can apply them to others and ourselves.

TALENT, SENSITIVE, EGOTISTICAL, MODEST, ARROGANT, TEAMPLAYER, DISCIPLINE, SPONTANEOUS, PRECISE, WILD, SHY, PRECOCIOUS, RELIABLE, RESTRAINED, PASSIONATE, INTIMATE, FUN. Often, certain characteristics are more emphasised and developed within us than

emphasised and developed within us than others. Whilst one person may seem to ooze with confidence, another may seem more shy and retiring. Frequently neither image is the true person, and each is reacting differently in order to disguise their insecurities. This can give rise to interesting ways of communicating messages to those around. Neither trait is more right or wrong than the other, but each has its limits when it comes to expressivity within music.

If as people we shy away from or over exude certain characteristics, it's unlikely we can easily portray the full range of emotions and characters in music. Our psycho-physical habits can quite literally shape our music. For example, a player who exudes 'bold as brass' may find it difficult to access their more intimate qualities, but equally players who habitually close their eyes may seem to conjure up a world of intimacy, but are actually blocking out those with whom they are trying to connect. There is

nothing wrong with shutting ones eyes, but frequently a player has become oblivious to this, and once it's pointed out, may initially find it almost impossible or too overwhelming to keep ones eyes open. We cannot be truly free if the habit rules us, and we are not in command of what we are doing.

It can be too much for a musician to abandon a much practised habit all at once. Often a few notes, or a reduced version of the habit are sufficient to work with to allow the musician to start questioning their way of doing things. The improved quality in sound, ability to breath, and things feeling easier start to outweigh the desire to return to the previous way. As a musician's confidence grows, this can spill over into all sorts of aspects of our lives.

Alexander Technique, by getting us to take an honest look at ourselves, and (gently) physically preventing us from our usual postural traits, can stop us from being so dependent on particular aspects of ourselves, and become more comfortable with other possibilities. Gradually we can start to build a fuller character, personal and musical, with lots of possible options, instead of a limited choice.

In Alexander work it is these psycho-physical habits that are challenged, what F M called 'the force of habit', or, very simply, my way of doing things.

Most people come to Alexander lessons convinced that they will be taught the correct posture and 'the right way of doing things', and that if they go away and practice this enough they will be 'doing it right'. Alexander work goes much further than this, revealing what a person's unique way of managing themselves is, and making the pupil conscious of their thoughts and actions. Once the pupil discovers that there is a whole programme of psychophysical activity going on that until now they have been oblivious to, they are in a position to consider their method and challenge themselves as to why they use this method. The more a pupil can be aware of and recognise their way of doing things, the more they can spot themselves resorting to this method in virtually every aspect of life. This can be invaluable for a musician, realising that these habits and tensions are almost constantly present in the daily performance of life. Many musicians end

up blaming the instrument or music for causing the problem. Usually the instrument only exaggerates to a greater extent what the person is constantly doing in order to get through anything in life. The habits show up strongly in music, partly because we try hard to play our best, and partly because playing music demands a level of emotional involvement in order to express ourselves freely. Combining this level of skill and precision with emotional expressivity draws on a musician's deepest reserves, and the musician is like a very finely tuned instrument, balancing all these different aspects.

### Chair work - the seat of deep-rooted anxieties

Alexander Technique lessons often revolve around the chair, either sitting on it, or getting in and out of it. Not surprisingly, many people assume that they are being taught how to stand up and sit down correctly, which is a musician's equivalent to just getting the right notes. However, how we operate around and on the chair can start to reveal our deep-rooted fears and innermost anxieties and insecurities and shows up what strategies, postural and behavioural, we have started to evolve to disguise these fears from ourselves and others. The habits we have when around chairs are the same habits we start to rely on to cope with our anxieties about playing music, our instruments, our jobs, our relationships with others etc. In order to be able to break the habits, first of all we have to meet and recognise them, and then gradually start to see what role they are constantly playing in life. Once we know very specifically what the psycho-physical are habits are, we can challenge them, and start to break them.

### **Faulty Sensory Perception**

Frequently we ourselves, or others have got as far as identifying the habit or problem causing tension. What we then do with this information often causes as many problems as it solves. Alexander Technique always works with the principles of inhibition and non-reaction. For instance, many pupils come to Alexander lessons, concerned about their posture which they feel is leading to round shoulders and a slump. I ask them what they have been doing about this, and 99% tell me they try to stand up straight, and go to the postural position which they feel makes them stand up straight.

However, all they do is pull their shoulders back, arch their back, restrict their breathing and end up looking like a sergeant major. Basically they react strongly against the perceived undesirable posture, and go as far in the opposite direction. The original fault may have disappeared, only to be replaced with another. In Alexander, working with inhibition, helps a pupil to let go of a familiar habit, without reacting to it. Many pupils initially fear that by preventing something that feels alive and normal to them, they will end up looking robotic and lifeless. However, F M Alexander was always insistent that there is no such thing as a correct position, and said that if we fix ourselves in positions, we deny the possibility of growth and development. Normally, if we stop doing something, we immediately want to do the opposite instead. For instance, if we realise our head is tilting back, we instantly want to rectify it, but end up doing the opposite. In Alexander, we work just simply with not doing the original, and not doing anything else either. If one simply stops pulling one's head back, one is left with their head on the top, balanced and where it belongs. However, it will feel wrong because on some level we feel we are not doing enough.

### Maintaining a Balance

Alexander Technique works with 'balance' in the broad sense of the word. The physical demands of playing an instrument coupled with the pressures and strains of performing can be huge. For musicians to cope with and sustain this lifestyle, retaining a sense of balance and perspective is essential. A few late nights away from home is manageable, but an unstable lifestyle can swing the internal pendulum well away from the central steady balance point. Once the pendulum swings, it may get stuck, and life carries on throwing up the same obstacles and hurdles until it collapses under the strain, or the pendulum swings violently in the other direction, reacting against those events. Alternatively the pendulum can be directly related to the behaviour and demands of those around. None of these recognise where the healthy, stable balanced place is any more, from where the musician can operate at their peak.

Usually the musician has some sense of where

they are on the pendulum scale, as do others around them. Signs that the internal pendulum has gone awry can hugely vary, affecting the physical, mental and emotional health of a musician. Depression, irritable bowel syndrome, weight problems, nail-biting, nervous twitches, mood swings, bodily rituals such as obsessive hand-washing, addictions such as drinking and smoking, always 'performing' and putting on an image, a string of broken relationships and promiscuous behaviour are all external indicators of the state of wellness and balance. If we are truly prepared to take an honest look at our habitual reactions to stimuli, Alexander Technique can offer us the tools to break patterns of tension and deal with the events in our lives we encounter as musicians.

Cat Jary teaches the Performing Arts module at The Alexander Teacher Training School, Balderton Street, W1, and is Director of The Alexander Music School. Visit www.alexandermusicschool.com

### ISSTIP

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# Body and Mind: The Forgotten Instruments

by H. Christian Bernhard II

H. Christian Bernhard II, Ph.D. is an assistant professor of music education at The State University of New York at Fredonia, where he teaches courses in instrumental methods, conducting, history, and philosophy of music education, as well as researches burnout among music educators and performers.

As instrumental musicians we often spend countless hours oiling valves, replacing strings, or adjusting reeds.

We invest precious financial resources in top-ofthe-line head joints, mallets, and bows. We search websites and catalogues for the latest developments in computer software, sheet music, and instructional methods. Despite these careful attempts to improve instrumental music performance and education, we often neglect our most valuable resources: our bodies and minds. By understanding and developing proper sleep, exercise, and nutritional habits, we can enhance musical productivity and experience abundant physical and mental health.

Perhaps the easiest and most relaxing way to promote good health is through the practice of sound sleep. However, according to the International Sleep Medicine Association (www.1sleep.com), daytime sleepiness is responsible for thousands of deaths annually and over forty million people around the world experience chronic sleep disorders, such as insomnia, sleep apnea, and narcolepsy. Furthermore, at least forty percent of adults suffer from daytime sleepiness severe enough to interfere with work and other normal activities, including musical performance and study.

To combat these problems, experts from the National Sleep Foundation (www.sleepfoundation.org) discourage the use of products containing nicotine or alcohol and warn that caffeine or food consumption immediately before bedtime may disrupt sleep patterns. They recommend the use of relaxing bedtime rituals, a cool, dark sleep environment,

and a consistent sleep schedule. They also suggest that daytime naps should not exceed thirty minutes and that chronic sleep problems should be reported to a medical doctor. Instrumentalists who follow these recommendations may experience a decrease in physical injuries, as well as a heightened sense of musical enjoyment.

Another method of promoting proper sleep, and an important component of overall health, is the practice of regular exercise. According to the IDEA Health and Fitness Association (www.ideafit.com), the world is experiencing an obesity epidemic, but physical activity can reduce the risk of weight gain, as well as heart disease, stroke, cancer, diabetes, high blood pressure, bone loss, and mental anxiety. While experts from IDEA suggest that society is beginning to recognize the importance of regular exercise, over sixty percent of adults do not exercise regularly and more than twenty-five percent are not active at all during their leisure time.

The Centres for Disease Control and Prevention (www.cdc.gov) recommends that adults participate in thirty minutes of moderate-intensity physical activity, five or more days per week, or twenty minutes of vigorous-intensity physical activity, three or more days per week. Examples of moderate-intensity physical activity include walking briskly or mowing the lawn, while examples of vigorous-intensity physical activity include jogging or swimming

continuous laps. Woodwind and brass performers can reap the benefits of exercise by increasing lung capacity and breath control, while all instrumentalists, including string players and percussionists, can use physical activity to enhance psychomotor strength, flexibility, and dexterity.

Of course, adequate sleep and exercise are of minor benefit if not accompanied by healthy eating habits. Researchers from the National Institutes of Health (www.nih.gov) state that approximately two-thirds of adults are overweight and approximately one-third are obese. Furthermore, poor nutrition can result in mental fatigue and anxiety, as well as a host of related physical problems that can negatively impact instrumental performance and teaching.

Dieticians from the United States Department of Agriculture (www.usda.gov) recommend consuming a wide variety of foods and beverages to ensure sufficient intake of diverse nutrients. They suggest that average adults should consume two to three servings of milk, yogurt, and cheese, two to three servings of meat, poultry, fish, beans, eggs, and nuts, three to five servings of vegetables, two to four servings of fruit, and six to eleven servings of bread, cereal, rice, and pasta every day. Alcohol, coffee, and soft drinks should be limited, as should oils, fats, and sweets. Finally, several small meals should be consumed regularly throughout the day, especially early, with sufficient intake of water.

So the next time we struggle to nail a high B-flat, whip through a sixteenth-note run, or interpret a slow-movement with grace and control, we should hesitate before blaming musical instruments, accessories, or methods. Without proper maintenance of body and mind, instrumental performance and education can be difficult and unrewarding. But with simple adjustments to sleep, exercise, and diet, we can enhance our lifestyles and focus on the joys of quality musical experiences.

# usic ind ovement

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# Musicians at the Computer Balanced Sitting Posture

Carola Grindea

After many years of research into instrumentalists' injuries, I came to the conclusion that these are caused primarily by the hold on the instrument, i.e. the interaction between the player and his instrument as well as by the physiologically incorrect sitting position when practising and performing. Above all, the main cause remains the negative tension in the joints: neck, shoulders, elbows and wrists.

In recent years, I have been concerned that, although the musicians who came to the ISSTIP Performing Arts Clinic were able to play with case and with freedom of movement, after having learnt how to sit or stand and how to use their body and muscles when practising, yet they often complained of back pains in particular.

We live now in a 'computer age' when so many activities are conducted, so to speak, in cyberspace and having an Email address is 'de rigeur' for professional musicians. Not only do they spend many hours at their desk, rehearsing for concerts before performing in the evening, with very little time to rest inbetween, but they also spend quite a few hours at their computers. This is the accepted means of communication, whether with the orchestral management, with agents or for personal communication. No wonder their bodies are grossly overused with a lot of damage being done, the muscles reacting to their misuse with pain, the inevitable result.

While these musicians have learnt how to interact correctly with their instruments, the computer poses new problems, especially when using the *mouse* - no matter how light the pressure. Invariably, they seemed unaware of how much *tension* they created in the forearm, wrist and elbow when stretching the arm to hold the mouse. The body was in the centre, but only the left arm was 'hanging' loosely from the shoulder, while the right arm was stretched, creating tension at the neck and shoulder, the distorted position becoming uncomfortable,

ultimately damaging, resulting in pain in the cervical and/or lumbar area.

Another problem is caused by the gadget attached to the computer, a support-bar for the wrists to rest on when typing. This restricts the movements, the wrists and arms remaining in ONE POSITION throughout the time spent at the computer.

There should never be just one set position, hands and arms should be free to move while typing.

Perhaps the reason why typists of the past did not get 'RSI' - repetitive strain injury - is because they used a light 'staccato' touch, with the forearms and hands in constant motion.

Watching myself at the computer, I realised that I am still using such a light staccato touch, thus my hands and forearms are never set in one position. While computer operators move their hands along 'horizontally' to the right or to the left , the wrists remaining in one position, my wrists move 'vertically' (down and up), both forearms following the movements.

### Sitting correctly at the computer

The choice of the chair is of utmost importance. There are many ergonomically designed chairs on the market which can be adapted for one to sit at the right height for one's body, the eyes in line with the screen so that the head is not tilted back. These chairs have the seat tilted forward

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so that the body is slightly bent towards the computer. If the chairs are not designed in this way, it is recommended to have one of the wedged cushions (seats) now on the market. But sitting forward is not enough, the whole body must be in a 'state of balance', having the feeling as if one were riding.

In my work, I recommend when sitting in this slightly tilted position to contract the buttocks' counting slowly up to five, then relaxing very slowly, counting likewise up to five but maintaining that 'upward' posture. This strengthens the lower dorsal muscles, which are important for supporting the spine.

Unfortunately many chairs, so-called 'ergonomically designed', force the user to tilt backwards, thus creating enormous strain on the lumbar area and, obviously, the result is 'back pain'.

It is interesting to note that one of the most brilliant cellists, Sebastian Comberti, had to stop playing because of excruciating back pains. While experimenting with various positions, he felt more comfortable bending over the instrument. He thus devised two blocks (Comberti Blocks) with holes of five cm on one side or deeper on the other to suit each instrumentalist, which are placed under the back legs of the chair, tilting it to the desired position. They have become very popular among orchestral players, many carrying them in their bags whenever they travel. The Danish orthopaedic surgeon, A.C. Mandal, has made a thorough study of the sitting posture of instrumentalists and of computer operators of all ages, and published many articles and books on the subject, emphasising the need for a 'balanced sitting posture on a forward-sloping seat' for healthy ergonomics.

'The erect posture looks very nice but it is impossible to sit this way for ...more than one or two minutes and usually results in fatigue, discomfort and poor posture.' In 1962, the German orthopaedic surgeon, Hanns Schoberth, demonstrated by X Ray photos that in a seated working position, you can only bend about 60 degrees in the hip joints not 90 degrees (Fig. 1).

Dr. Mandal tried out other positions before finding the most comfortable state for the body and, after taking about fifty photographs of the

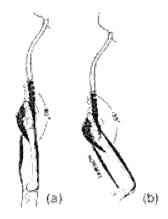


Fig. 1

subject sitting at his desk, he came to another interesting conclusion: that it is the height of the seat in relation to the desk which determines the best position, together with the lowering of the legs, thus preserving the *lordosis* in the lumbar region:

'The final position (Fig. 2) with feet lowered simulating an even higher seat and work surface, is the natural resting position where the muscles are relaxed...thus this is the perfect posture for "Balanced Seating", the most suitable for long periods of sitting...that can eliminate lower back strain and ultimately prevent chronic back pain.'

It is recommended that pianists and other instrumentalists who play while sitting down, as well as keyboard operators, place their right foot forward, (by the pedal, if pianists) and the left one bent slightly back as if 'riding'.



"This balanced seating posture will not only prevent any back problems or injury but will also enhance the efficiency and the well-being of performers and of computer users of all ages".

Fig. 2

### **Bibliography**

Mandal A.C. 'The Seated Man (Homo Sedens)' in *Applied .Ergonomics* 12.1.p 19 Oxford 1981

Mandal A.C. 'The Influence of Furniture Height on Backpain', *Behaviour and Information Technology*, No 3, p.247, London 1987.

'Comberti Blocks': Email <sebastian@celloclassics.com>

Grindea, Carola: Tensions in the Performance of Music - a Symposium (Kahn and Averill. 1978 8th edition)

Grindea, Carola: 'Prevention of Musicians' Injuries' in ATW Journal, Spring 2000

### General Advice to Musicians

### Christopher B.Wynn Parry, M.B.E., M.A., D.M., F.R.C.P., F.R.C.S.

Neurolog/Rheumatolog, Consultant Adviser at ISSTIP and BPAMT Clinics; Co-author with Ian Winspur, F.R.C.S., F.A.C.S.,

of the highly acclaimed book "The Musician's Hand"- a Clinical Guide (Martin Dunitz)

### Responsibilities of Performing Musicians

- . Importance of General Fitness
- 2. Importance of Good Posture
- 3. Good, well balanced diet
- 4. Need to work on Relaxation
- 5. Importance of 'warming up' and 'cooling down'
- 6. Sensible practice technique, not more than 20-30 minutes at a time. STOP and stretch for five minutes, have a drink
- 7. Need to have some "body control" techniques so that musicians can control the body in times of stress and <u>not let it control them!</u>
- 8. Need for recreation / holidays
- 9. Need to develop broader culture

### Responsibilities of Teachers

- 1. Correct choice of instrument for musician's body build and temperament
- 2. Correct technique from early stages
- 3. Inculcate sensible practice and study of technique
- 4. Early referral to Doctor/Therapist in case of trouble

Playing should never be painful if technique is sound,

body fit and spirit calm!

# My Voyage of Discovery

Reuben Cainer

I am 19 years old and play the electric bass guitar. For the past six months, I have been suffering from acute pains in my neck, the right shoulder and arm and I had an operation to relieve the ulnar nerve. I still had pains and discomfort and I was unable to carry on with my studies. I was then advised by the Royal Society of Musicians to see Professor Carola Grindea.

My main problems were as follows:

- (1) I would rotate my upper body slightly to the left to hold the guitar, thus distorting it, misusing my body and muscles for many years. This created a twist at the bottom of my spine.
- (2) When I demonstrated how I sit,how I hold the guitar I would sit bolt upright, over enthusiastically trying to assume what I thought was a good posture. My head was facing straight forward and I was trying to hold it very still. I was however holding myself far too rigidly in this position, creating tension most prominently in my shoulders and neck. I could not relax my neck and shoulders and I realised that my elbows were quite stiff, causing tension throughout my arm.

Prof Grindea made me realise the importance of having a correct posture, without any tension in any parts of the body and especially in any of the muscles or joins of the playing apparatus:

neck, shoulders, elbows and wrists. and to hold the instrument lightly, without pressing the hands and fingers on to the guitar. I learnt that I must adapt the way I hold the instrument to my body, not adapt my body to the instrument.

In order to liberate the tension in my neck, shoulders, back and elbows there were some preliminary exercises.

(a) Letting my head drop, completely relaxed would help relieve tension in my neck.

- (b) For my shoulders and back I would raise my shoulders as high as possible ,then drop them, very relaxed.
- (c) For my elbows I would sit with my hands on my lap, open up my arm-pits, with elbows outward then let them flop by my side.
- (d) Further exercises to relieve tension:

Stand up, swing both arms first forward (hands facing each other, at approximately 25cm distance), then swing arms upwards,hands pointing to the ceiling, making sure that there is a total alignment of , the whole skeleton, from the tip of the fingers to the heels. Then STRETCH as much as possible, feeling the whole body expanding; then stretching the arms horizontally, palms facing down and ending by flopping the arms down,very relaxed.

While doing this exercise looking in the mirror, it was apparent that my right elbow was slightly 'inward', and this must have caused a condition which the doctors diagnosed as 'tennis elbow'. Professor Grindea suggested to let my whole arm drop,relaxed, then rotate the upper arm just one degree inward, which brings the elbow outward, in correct position, the whole arm hanging in an arc, thus the tennis elbow' is corrected.

This exercise helps to draw attention to slight dysfunctions in the way the body has adapted to the conditions it has been in and how to reeducate it to adopt a more natural position. It is very interesting to observe how a very slight anomaly in the way persons hold themselves can often cause a physical reaction and very often pain when the body is exposed to repetitive tasks. Moreover, a bad habit in one area of the body can cause a chain reaction through the body and create tension in another seemingly 'unrelated' area.

We went to the next stage of my re-education programme. I was introduced to the Grindea Technique, which is a MENTAL EXERCISE.

- (a) standing up, at ease, with feet slightly apart, and with shut eyes, 'order' the spine to lengthen upwards. One experiences a strange sensation of the spine gently moving upwards, sending the head upward and placing it on the last vertebrae; at this moment there is no tension in the neck, the posture is correct with perfect alignment of neck and back
- (b) standing very still, exhale slowly, whispering 'Ha-a-a-a-a' being aware of the breath being sent inside the body, relaxing the diaphragm area, as well as realising that the sholders have gently dropped
- (c) While the body inhales (after exhaling, one has to inhale) concentrate attention on the knees and ankles, imagining them very soft, like foam. One experiences a sensation of lightness, the body feels like it is floating in space. The body is totally liberated of any tension and all imbalances have been corrected. Very often, when all muscles and joints are in this ideal state, all pains and discomfort simply vanish.

I was now ready to start playing the guitar.

Performing the Grindea technique before 'playing is a must, to have the body in perfect posture before playing, free of any tension. The moment I started to play the electric guitar, the support of the instrument pressed on my shoulder and the tension in the neck came back as I was standing too rigidly to hold everything in place.

I learnt the importance of moving the whole body while playing. If you are moving with the music, your the body cannot lock itself into an awkward position wich creates more tension. I learnt that I must move more flowingly and gently with my music, and I also realised that if

I sing, I feel freer.

Prof Grindea made me aware that I was shaking my head to the right and to the left in rhythm with the music, which created more tension in my neck and shoulder.

The idea is that moving with the rhythm of the music certainly helps the entire body reach a point of freedom of motion, liberating any points of tension that may be holding parts of the body rigidly in place.

The next stage involved a session with another musician who plays the electric guitar and this clarified even more everything that I have learnt so far.

David suffered from a curvature of the spine for many years, which resulted in a very awkward posture, one shoulder nearly 3 cms higher than the other, as well as having his neck his neck offset in relation to his shoulders, thus one shoulder is wider than the other. In turn this makes him lean excessively onto one leg. He also has 'tennis elbow' and, oddly enough, he also had the same operation for the ulna 'nerve' as I had. It appears that many guitarists suffer from the same condition. It is important that they should realize the value of re-education and above all, to realise what the cause is. Perhaps such operations may be avoided.

David has spent most of his life in this distorted position and his body has 'locked' itself into an awkward posture - no wonder he had so many physical problems!

This made me realise how every part of the body is related to the whole one's being and that there is no such a thing as treating just one area. Only through a holistic approach can we learn to cope with our physical, physiological and psychological problems which affect so many of us.

Thanks to what I have learnt so far I feel I am now ready to start my studies for a degree in Musical Performance and I am looking very much forward to it.

### **ISSTIP**

International Society for the Study of Tension in Performance

(Registered No. 328203) C/O 28 Emperor's Gate, London S W 7 4HS Tel 020 7373 7307 Fax 020 7373 5440

The International Society for the Study of Tension in Performance was founded in September, 1981, in response to an overwhelming concern with the debilitating effects of anxiety and tension experienced by performers in many areas such as music, dance, theatre, sport and public debate.

The objects of the Society are:

- 1. to foster research and related activities;
- 2. to collect and disseminate information:
- 3. to provide an advisory service for members
- 4. to provide a service for musicians in need of therapy

Membership to the Society permits attendance to conferences and seminars at reduced fees; receipt of **Newsletters** and the **Journal of the Society**, which contains information on many topics related to the study of tension in performance. **Free to members** 

Copies of journals Nos. 1 to 12, may be purchased from the Secretary (£3.50 per issue).

International conferences and seminars are organised in the United Kingdom, in USA and in some European countries.

In 1990, ISSTIP established the first **Performing Arts Clinic in the UK at London College of Music**, Thames Valley University, St. Mary's Road, London W5 SRA, offering consultations to music students, teachers, performers. More than 1000 musicians have been helped. Database available.

In 2002 ISSTIP set up the first UK Courses to train Music Medicine Therapists

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### Reviews

### **BOOK REVIEWS**

"Stage Fright – The Art of Performing under Pressure"

### by Åke Lundeberg

Review by Radojka Suceska Ligutiç, (Psychologist in Music Schools in Croatia)

Sometimes events in life move in full circles without our effort. This happened to me with this book. Professor Carola Grindea gave me the English version of the book, three years ago. She said "Someone gave me this copy, I think it is very interesting"

A year later I got in contact with Dr. Åke Lundeberg from Stockholm and his editor Musikvorlag gave me permission to translate it into Croatian and editing it. The book was published in Croatian by Music Play, Zagreb (same publishers as the ones who issued Tensions in Performance of Music', by Carola Grindea tanslated by Radojka Suceska Ligutic).

As a follow up, Dr Lundeberg was invited by the Croatian Society of Music Pedagogues to present a workshop which took place in Rijeka, which was received with great acclaim by the teachers present.

### Who is Ake Lundeberg?

He is a physician specially trained in psychotherapy and a violin teacher who studied with Kato Havas, among others who introduced him to her own studies in stage tright and her violin method.

He was Concertmaster of an amateur orchestra for 10 years and played in professional symphony orchestras. Currently he has a Duo with a pianist 'Duo Musica Romantica. The violin/piano repertoire is rich and performing gives him the opportunity to try out his own methods. Thanks to his experiments with musicians, the methods he presents at the courses are constantly being tested and expanded.

So, "The Art of Performing under Pressure" is now his full time occupation. Many music academies, Symphonic and Chamber Music orchestras invite him to work with orchestral players and he has presented workshops in many Universities in USA, Spain, Amsterdam, Iceland, Norway, Finland, Denmark and Sweden.

Comments on his workshops and courses are full of praise: "Now I know specifically what to do for the first time...It works!... I am surprised –it works and I no longer need to take beta-blockers...I am still nervous when I perform, but no longer scared, which makes it exciting...Better performance training than years in the conservatory...the course involved all my senses in a new unexpected way..." His methods and experience are clearly presented in the book "Stage Fright – The Art of Performing under Pressure". A second book is on its way with preliminary title "Stage Presence, Nervousness and True Concentration".

### About the art of performing

Every art is a combination between craftwork and art. This is true concerning style and content of this book.

With regard to craft – the author deals with intrinsic concepts –nervousness, pressure, learning to relax, preparing mentally to perform, attitude to training and programming your brain.

In this text Lundeberg deals with elementary concepts and new concepts such as stage presence, *goulding* and/or coping with catastrophy what he calls: 'an eye for the storm' (he explains these newly coined terms further on).

Right from the beginning the author confronts us with three statements that reshape the meaning of nervousness (usually negative connotation). He includes several statements

which summarise his ideas: You need to be nervous in order to be able to give your best Nervousness becomes a positive power when the energy is focused and directed outward. You can learn the technique of performing under pressure rather quickly - but you can never learn the art of performance quickly. With the last sentence he makes a clear distinction between technique and art, at the same time telling us not to underestimate performing - which is an art in itself. He encourages us by telling us that technique can easily be learnt, but he challenges us to give all our energy and inner searching to learn the art of performing.

Lundeberg uses an original, witty yet simple metaphor in answer to what is the pressure we feel when on stage. He compares performing on stage with walking on a high plank:

A plank lies on the grass. The task is to walk on it without touching the ground. Easy isn't it? The plank is three yards above the ground. Now it suddenly feels difficult.

The plank is between two cathedral towers. Now that feels impossible.

The act of walking itself is the same. Yet we do not hesitate to say that it is much more difficult when the plank is high above the ground. We experience the pressure. But where is the pressure? Doing what I know I can, but obviously doubt far inside, to walk on the plank in the same way as when it lies on the ground. To be able to do that is to be able to perform under pressure.

How to be able to do that? The author gives us one interesting answer dating back to Italian Renaissance.

Baldesar Castiglione wrote the frequently quoted book The Courtier in 1528. He talks about three attitudes necessary for Performance:

- decoro
- sprezzatura
- grazie

Decoro means dignity, signifying that the artist should have professional pride. The artist feels confident in trusting his/her technique, performance experience and competence. Decoro is that side of performance normally taught in schools. Necessary as it is, it is only the beginning.

Sprezzatura has the double meaning of "fearlessness" and "nonchalance". There is always a threat that the performance might go wrong. The artist needs a certain amount of "fearlessness" to overcome performance anxiety and then the audience will think "he could perform things ten times more difficult! It is all so easy for him."

Decoro and sprezzatura often result in'grazie' i.e.the divine grace. The gods are present in your performance, giving you gracefulness and a divine sparkle in the performance.

A very important concept is Stage Presence. With this skill a performer can overcome negative thoughts and feelings, keep concentration on music and let inspiration happen. It is the key to effective nerve control. The author writes: we have to decide and control what information is to be given to our sensory channels. He teaches us how to feel our inner and outer ear, how to use an image of a tree to connect the body with the music, what to look at with our direct vision, and how to project the music into the space with our peripheral vision. After practising this skill you will get the feeling of what the author calls 'The Eye of the Storm' meaning that you are still and tranquil although you feel a lot of excitement around your centre (the same happens with real storms on the

The conductor of stage presence is the Inner Ear, with which he deals in the chapter called Goulding. He encourages us to sing loudly (macrogoulding), softly (minigoulding) or without voice (microgoulding) in order to practice our inner ear.

Like a true professional Lundeberg takes care of every detail - walking on the stage, thanking for applause, introducing the programme, eye contact with audience etc. but also suggest how to get constructive thoughts and attitudes towards performing.

Thus, every aspect of making music and performing, except the actual technique of playing the instrument, is covered in this book.

### Reasons for reading this book

This is, for sure, one of the most comprehensive books on stage fright. It is a good mixture of professional knowledge and experience. Easy to read, understand witty and – clearly explained to apply its principles when on stage.

The value of the book is not only in helping the reader to become more competent when performing. It is also to remind us of something we incline to forget during our long musical education and never ending preparations for the performance - that the meaning of every art, and of music in particular, is to communicate to the listener, to give the audience a part of your inner self and in that way make an impact on another person. In order to affect the listener we have to be in contact with ourselves and with the art we are performing. Our perception, teelings and thoughts must be wholly in the service of music and the performance. Only when we have learnt how to serve that one master - we will overcome our limitations and

grow as a person and ultimately as the performer we strive to be.

The author insists that this is a handbook. Indeed, it only has about 80 pages (with illustrations) and it should be the kind of book you keep always at hand -whether you are a teacher, musician, or actor. If we accept the saying that life is a stage, then stage fright is part of everyday life. That's why the methods described in this book can help us to become more competent in our everyday life.

(Dr Ake Lundeburg e-mail is: akel@chello.se)

# With MUSIC in MIND

-for beginners at the piano



by Gillian Skottowe Earl

A child taught to read and sing music in phrases without first 'spelling' the notes on the piano shows he can 'hear' the music in his mind. It makes the music make sense and enables

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